



## **WATER RESOURCES RESEARCH GRANT PROPOSAL**

**Project ID:** 2005RI34B

**Title:** Risk Assessment Methods for Water Infrastructure Systems

**Project Type:** Information Transfer

**Focus Categories:** Methods, Treatment, Water Supply

**Keywords:** None

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**End Date:** 02/28/2006

**Federal Funds:** \$25,000

**Non-Federal Matching Funds:** \$50,160

**Congressional District:** 02

**Principal Investigator:**

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### **Abstract**

In view of recent terrorist acts, the adoption of a comprehensive and systematic approach to securing homeland infrastructures becomes paramount. An infrastructure's security permeates all aspects of its planning, design, construction, operation and maintenance. Major infrastructure security themes address (1) the identification of critical assets (system analysis), (2) the assessment of risk (systematic evaluation of critical assets in terms of their susceptibility and the assessment of consequences through scenario enactment) and (3) the derivation of responses (mitigation actions that restore the system to partial or full operation).

Recent homeland security efforts have sprouted various methodologies for (3) assessing security risks at the critical nation infrastructures including water infrastructures. For security to be effective, standard procedures need to be consistently applied to infrastructure systems. This consistent application affords the comparability of results towards the priority ranking of potential security risks, their management and their mitigation. The proposed study will review the worldwide state-of-practice in assessing risk at water infrastructures in the aim to adopt a standard methodology for Rhode Island facilities. Standard selection will be based on the breath of coverage of the relevant security themes and on method effectiveness and efficiency.